

**SUBSTRATES COATED WITH MIXTURES OF TITANIUM AND ALUMINUM MATERIALS,  
METHODS FOR MAKING THE SUBSTRATES, AND CATHODE TARGETS OF TITANIUM  
AND ALUMINUM METAL**

**ABSTRACT OF THE INVENTION**

Titanium and aluminum cathode targets are disclosed for sputtering absorbing coatings of titanium and aluminum-containing materials in atmospheres comprising inert gas, reactive gases such as nitrogen, oxygen, and mixtures thereof, which can further comprise inert gas, such as argon, to form nitrides, oxides, and oxynitrides, as well as metallic films. The titanium and aluminum-containing coatings can be utilized as an outer coat or as one or more coating layers of a coating stack.